

RAY K. SHAHANI
ATTORNEY AT LAW



Registered Patent Attorney - Technology and Intellectual Property Matters
<http://www.attycubed.com>

Cofc

Twin Oaks Office Plaza
477 Ninth Avenue, Suite 112
San Mateo, California 94402-1854

Telephone: (650) 348-1444
Facsimile: (650) 348-8655
e-mail: rks@attycubed.com

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
BENDER)
Serial No.: 10/007,310)
Filing Date: November 30, 2001)
Patent No.: 6,761,826)
Patent Date: July 13, 2004)
Attorney Docket No.: JB-301)
Title: PULSED BLACKBODY)
RADIATION FLUX)
ENHANCEMENT)

TRANSMITTAL

Date Mailed: November 3, 2004

Examiner: HOEY, Betsey M.

Group Art Unit: 1724

Certificate
NOV 10 2004
of Correction

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

TRANSMITTAL

Dear Sir:

Enclosed please find the following documents related to the above-entitled patent application:

1. REQUEST FOR CERTIFICATE OF CORRECTION: 4 page(s);
2. Copy of original US Patent No. 6,761,826, page 18 with corrections: 1 page(s); and
3. Return Receipt Postcard.

///

NOV 12 2004

TRANSMITTAL
Filing Date : November 30, 2001
Date Mailed: November 3, 2004

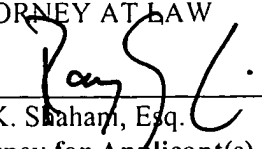
Title: PULSED BLACKBODY RADIATION FLUX ENHANCEMENT
Serial No: 10/007.310
Attorney Docket No: JB-301
Page 1 of 2

Respectfully submitted,

RAY K. SHAHANI
ATTORNEY AT LAW

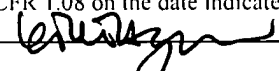
Dated: November 3, 2004

By: _____


Ray K. Shahani, Esq.
Attorney for Applicant(s)

Ray K. Shahani, Esq. Registration No.: 37,554
Attorney at Law
Twin Oaks Office Plaza
477 Ninth Avenue, Suite 112
San Mateo, California 94402-1854
Telephone: (650) 348-1444 Facsimile: (650) 348-8655
E-mail: rks@attycubed.com

CERTIFICATE OF MAILING

I hereby certify that this paper and the documents attached hereto are being deposited in a postage prepaid, sealed envelope with the United States Postal Service using First Class Mail service under 37 CFR 1.08 on the date indicated and is addressed to "Commissioner for Patents, Alexandria, Virginia 22313-1450". Signed: 
Date Mailed: November 3, 2004

NOV 12 2004

TRANSMITTAL

Filing Date : November 30, 2001

Date Mailed: November 3, 2004

Title: **PULSED BLACKBODY RADIATION FLUX ENHANCEMENT**

Serial No: 10/007,310

Attorney Docket No: JB-301

RAY K. SHAHANI
ATTORNEY AT LAW



Registered Patent Attorney - Technology and Intellectual Property Matters
<http://www.attycubed.com>

Twin Oaks Office Plaza
477 Ninth Avenue, Suite 112
San Mateo, California 94402-1854

Telephone: (650) 348-1444
Facsimile: (650) 348-8655
e-mail: rks@attycubed.com

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
BENDER)
Serial No.: 10/007,310)
Filing Date: November 30, 2001)
Patent No.: 6,761,826)
Patent Date: July 13, 2004)
Attorney Docket No.: JB-301)
Title: PULSED BLACKBODY)
RADIATION FLUX)
ENHANCEMENT)

REQUEST FOR CERTIFICATE
OF CORRECTION

Date Mailed: November 3, 2004

Examiner: HOEY, Betsey M.

Group Art Unit: 1724

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION

Dear Sir:

Applicant is in receipt of the US Patent No. 6,761,826 issued July 13, 2004. Thank you for your continued expedient attention to these matters.

///

NOV 12 2004

REQUEST FOR CERTIFICATE OF CORRECTION
Filing Date : November 30, 2001
Date Mailed: November 3, 2004

Title: PULSED BLACKBODY RADIATION FLUX ENHANCEMENT
Serial No: 10/007,310
Attorney Docket No: JB-301

CORRECTIONS

Attached hereto please find a copy of Patent No. US 6,761,826 issued 07/13/2004, with the requested correction indicated directly thereon page 18, column 14, line 10 to line 32, Claim 13 to Claim 20 .

The changes include:

1. Correction of dependency in issued Claims 13 through 20 as follows:

13. The method of Claim ~~12~~ 11 further comprising the step of backwashing the main filtration membrane.
14. The method of Claim ~~13~~ 12 in which the step of treating the water with radiation lasts for 30 minutes.
15. The method of Claim ~~12~~ 11 further comprising the step of pre-filtering the water prior to filtration of the water through the main filter membrane.
16. The method of Claim ~~12~~ 11 in which the electromagnetic radiation develops a radiant excitance of between about 40,000 W/cm² to about 170,000 W/cm².
17. The method of Claim ~~12~~ 11 in which the electromagnetic radiation develops a peak power output of between about 2 MW to about 6 MW.
18. The method of Claim ~~12~~ 11 in which the electromagnetic radiation has wavelengths between about 185 nm to about 3,000 nm.

///

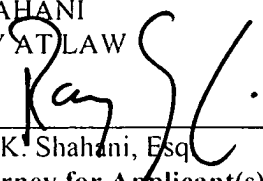
19. The method of Claim ~~13~~ 12 in which about 38 percent to about 52 percent of the electromagnetic radiation has wavelengths in the range of between about 185 nm to about 400 nm.
20. The method of Claim ~~12~~ 11 in which the electromagnetic radiation is pulsed at a rate of between about 0.1 to about 30.0 pulses per second.

///

Respectfully submitted,

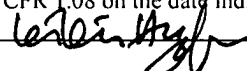
RAY K. SHAHANI
ATTORNEY AT LAW

Dated: November 3, 2004

By: 
Ray K. Shahani, Esq.
Attorney for Applicant(s)

Ray K. Shahani, Esq. Registration No.: 37,554
Attorney at Law
Twin Oaks Office Plaza
477 Ninth Avenue, Suite 112
San Mateo, California 94402-1854
Telephone: (650) 348-1444 Facsimile: (650) 348-8655
E-mail: rks@attycubed.com

CERTIFICATE OF MAILING

I hereby certify that this paper and the documents attached hereto are being deposited in a postage prepaid, sealed envelope with the United States Postal Service using First Class Mail service under 37 CFR 1.08 on the date indicated and is addressed to "Commissioner for Patents, Alexandria, Virginia 22313-1450". Signed: 
Date Mailed: November 3, 2004



COPY

US 6,761,826 B2

13

blackbody, deep-UV irradiation, wherein the precipitation of inorganic molecules and organically complexed minerals, partial or complete mineralization of organic molecules and the deactivation or destruction of microbes caused by the oxidizing species reduce the transmembrane pressure. ✓

2. The system of claim 1 wherein the filtration membrane constitutes a microfiltration membrane. ✓

3. The system of claim 1 wherein the filtration membrane constitutes a plurality of membranes. ✓

11 4. The system of claim 1 in which the electromagnetic radiator can be pulsed at a rate of between about 0.1 to about 30.0 pulses per second. ✓

5. The system of claim 1 further comprising pump and associated valves for backwashing the filtration membrane. ✓

6. The system of claim 1 further comprising a pre-filter disposed between the electromagnetic radiator and the inlet to the filter membrane. ✓

7. The system of claim 1 in which the electromagnetic radiator comprises a lamp which develops a radiant excitation of between about 40,000 W/cm² to about 170,000 W/cm². ✓

8. The system of claim 1 in which the electromagnetic radiator comprises a lamp which develops a peak power output of between about 2 MW to about 6 MW. ✓

9. The system of claim 1 in which the electromagnetic radiator comprises a lamp which radiates electromagnetic energy at wavelengths between about 185 nm to about 3,000 nm. ✓

10. The system of claim 9 in which about 38 percent to about 52 percent of the output electromagnetic energy has wavelengths in the range of between about 185 nm to about 400 nm. ✓

11. A method for enhancement of flux through a hollow fiber-type filter membrane, the method comprising the following steps: ✓

14

treating the water to be filtered by exposure to pulsed blackbody, deep-UV electromagnetic radiation prior to purifying the water with a hollow fiber-type main filter membrane to prevent fouling of the membrane by the group of contaminants of water consisting of organic molecules, metal ions and complexed minerals. ✓

12. The method of claim 11 wherein oxidation of a water matrix by the pulsed blackbody UV yields ozone, hydrogen peroxide, and hydroxyl radicals. ✓

13. The method of claim 12 further comprising the step of backwashing the main filtration membrane. ✓

14. The method of claim 13 in which the step of treating the water with radiation lasts for 30 minutes. ✓

15. The method of claim 12 further comprising the step of pre-filtering the water prior to filtration of the water through the main filter membrane. ✓

16. The method of claim 12 in which the electromagnetic radiation develops a radiant excitation of between about 40,000 W/cm² to about 170,000 W/cm². ✓

17. The method of claim 12 in which the electromagnetic radiation develops a peak power output of between about 2 MW to about 6 MW. ✓

18. The method of claim 12 in which the electromagnetic radiation has wavelengths between about 185 nm to about 3,000 nm. ✓

19. The method of claim 12 in which about 38 percent to about 52 percent of the electromagnetic radiation has wavelengths in the range of between about 185 nm to about 400 nm. ✓

20. The method of claim 12 in which the electromagnetic radiation is pulsed at a rate of between about 0.1 to about 30.0 pulses per second. ✓

* * * * *

CR LCL
10/20/04